# JAPAN FUND FOR POVERTY REDUCTION GRANT
# ENABLING AND SKILLING COMMUNITIES FOR SUSTAINABLE WATER SERVICES IN WEST BENGAL

## I. INTRODUCTION

1. The proposed West Bengal Drinking Water Sector Improvement Project will provide safe, reliable, and continuous drinking water—as per the Government of India's standards—to at least 1.65 million people (100% of the population in the *gram panchayats* covered under the project) in the arsenic-, fluoride-, and salinity-affected selected areas of Bankura, North 24 Parganas and Purba Medinipur districts of West Bengal.[1] The project will introduce innovative practices, modern technology for smart water management, and sustainable institutional frameworks to create an inclusive, resilient, and sustainable model for the delivery of drinking water services for the selected rural areas in the state of West Bengal. It will strengthen institutional structures and build stakeholders' capacities at all levels of service delivery to improve sustainable operation and maintenance (O&M) of the assets and sustain improved public health. The Public Health Engineering Department (PHED) of the Government of West Bengal (GOWB) will be responsible for operating, maintaining, and monitoring the bulk water systems up to the boundary of the *gram panchayats*, whereas the *gram panchayats* will operate and maintain the distribution network within their administrative boundaries.

2. The impact of the project will be drinking water security ensured in West Bengal.[2] The outcome will be safe, sustainable, and inclusive drinking water service received in project districts.

3. The grant to be provided by the Japan Fund for Poverty Reduction (JFPR) will support (i) the development and operationalization of a smart water management system at the *gram panchayat* level; (ii) skills and capacity building of local stakeholders for sustainable, resilient, and inclusive service delivery; and (iii) the piloting of innovative practices, the strengthening of regulatory frameworks, and the raising of community awareness on water conservation, public health, and sanitation improvement.

## II. THE GRANT

### A. Rationale

4. West Bengal, the fourth most populous state and the sixth largest economy in India, is by far the worst-impacted state in terms of arsenic and fluoride contamination, hosting around 72% of India's total population at risk from arsenic contamination and 5.3% of the population at risk from fluoride contamination.[3] The GOWB estimates that about 91% of West Bengal's rural population and 41% of its urban population still rely on its groundwater reserves for drinking,

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[1] *Gram panchayats* are governing bodies working at the village level. A neighboring block in South 24 Parganas district was included in the drinking water scheme of North 24 Parganas.

[2] Government of West Bengal, PHED. 2011. *Vision 2020: To Provide Safe, Sustainable, and Adequate Water Supply to All Humans and Livestock in West Bengal by 2020*. Kolkata. http://www.wbphed.gov.in/en/pages/vision-2020; and Government of India, Ministry of Drinking Water and Sanitation. 2016. *National Sub-Mission Guidelines to Provide Safe Drinking Water to Arsenic and Fluoride Affected Habitations in Rural India on Mission Mode*. New Delhi. http://www.mdws.gov.in/national-sub-mission-guidelines-provide-safe-drinking-water-remaining-arsenic-and-fluoride-affected.

[3] Government of India, Ministry of Drinking Water and Sanitation. Integrated Management Information System. Data valid as of 17 May 2018.

despite being located alongside two of the largest rivers in India, the Ganges and Brahmaputra.[4] Further, only about 47% of West Bengal's rural population of 74.6 million has piped water supply, compared to the national average of 56%.[5] Since the consumption of untreated naturally elevated levels of arsenic and fluoride in groundwater is the principal cause of arsenic and fluoride public health risks, including cancer and risks to children's cognitive development, the GOWB and the Government of India's Ministry of Drinking Water and Sanitation are investing in shifting the population from reliance on groundwater-based hand pumps or tube wells to surface and subsurface water-based piped water supply schemes, which offer greater certainty in water quality and security.

5. Overall, the West Bengal Drinking Water Sector Improvement Project will support the GOWB and the Government of India in ensuring drinking water security in 66 *gram panchayats* (out of the 3,349 *gram panchayats* in the state) in selected districts of West Bengal affected by arsenic, fluoride, and salinity contamination by (i) constructing and upgrading drinking water infrastructure to achieve climate-resilient, inclusive, and sustainable service delivery; and (ii) setting the appropriate institutional framework and strengthening the capacity and skills of institutions and local stakeholders to achieve inclusive operational sustainability. The on-premises household connections, adequate supply of water at 70 liters per capita per day,[6] and district metering area (DMA)-based metered continuous water supply—which are key aspects of the project design—are extremely rare in the context of rural water supply in India. In addition, having such rural water supply systems equipped with efficiently managed water services, information technology-based smart water management tools, and a sustainable and inclusive asset management and service delivery framework (AMSDF) between the state-level bulk supplier and the project *gram panchayats* is a highly innovative and futuristic institutional model for rural water supply. This will result in time savings, improved living conditions, and increased educational and economic opportunities for local stakeholders, including women and children. The strong focus on institutional strengthening and skills and capacity building of local stakeholders in water operations will create about 350 additional jobs at the local level in project districts, of which a minimum 33% will be for women. Therefore, the project is expected to create an exemplary model for rural or urban drinking water service delivery in West Bengal and in India.

6. The initial project proposal from the PHED included small groundwater-based schemes without household connections and no DMA approach. The project was redesigned through extensive discussions with the Asian Development Bank (ADB) and with the support of a project preparatory team of consultants to make the project climate resilient, inclusive, and sustainable by taking the following critical steps: (i) only tapping sustainable surface and subsurface sources; (ii) designing the water supply systems based on comprehensive drinking water quality action plans for the entire district, and on a grid, where feasible; (iii) designing the distribution systems on a DMA basis with metered household connections and with smart water management devices; and (iv) devising the AMSDF with *gram panchayats* and the PHED, and incorporating inclusive skills and capacity improvement measures for the long-term sustainability of services. As a result of the policy discussions with ADB as part of the project redesign, the GOWB issued a government order on 9 November 2017 to all project *gram panchayats* on the AMSDF, which (i) clearly defined the roles and responsibilities of the PHED, the *gram panchayats*, *panchayat samitis*, and *zilla*

[4] Data from Integrated Management Information System (IMIS) of Public Health Engineering Department (PHED), Government of West Bengal (GOWB), valid as of 17 May 2018.
[5] Piped water supply is generally through public standposts and at less than 40 liters per capita per day.
[6] The Government of India's prescribed standard for rural water supply is a minimum of 55 liters per capita per day.

*parishads*; and (ii) set guidelines for operational sustainability parameters, such as metering, water user charge, and human resourcing.[7]

7. While the 66 project *gram panchayats* are committed to sustainably managing the water supply distribution systems, initial grant funding support will build their capacity, equip them with the necessary skills, and permit the introduction of innovations on smart water management in the project *gram panchayats*' drinking water supply management. These innovations include (i) the establishment of smart water management systems within the *gram panchayats* through the provision of required equipment for the distribution network, such as sensors, computers, smart meters, billing and collection software and hardware, and handheld meter-reading devices; (ii) the strengthening of local stakeholders' skills and capacity on water operations through certified technical and financial training; and (iii) the piloting of innovative practices, the strengthening of regulatory frameworks, and the raising of community awareness on water conservation, public health, and sanitation improvement. These innovations are likely to set a model for a sustainable, resilient, and inclusive rural drinking water supply system in West Bengal and in India.

## B. Outputs and Key Activities

8. The grant will contribute to the two outputs of the project: (i) climate-resilient drinking water infrastructure constructed; and (ii) institutions and capacity of stakeholders for drinking water service delivery strengthened. The grant activities focus on supporting the *gram panchayat*-level smart water supply system and stakeholders' management skills, capacity, and awareness through the provision of the right mix of equipment, works, advisory support, and training. There will be three grant outputs:

(i) **Output A: *Gram panchayat*-level smart water management system successfully commissioned.** The grant will support the appropriate design, provision, and operations of smart water management equipment such as smart meters, handheld meter readers, leak detection tools, computers and software for billing and collections, and customer complaint management. Each project *gram panchayat* will own the equipment, and sign and implement the AMSDF with the PHED for efficient service delivery and financial sustainability. Key activities under this output are as follows: (a) prepare *gram panchayat*-level smart water management system design; (b) facilitate approval of the AMSDF in each project *gram panchayat*; (c) procure and install system equipment; (d) test and commission smart water management system; (e) develop operation manual for smart water management system, and (f) provide operational support.

(ii) **Output B: Skills and capacity of local stakeholders for drinking water service delivery strengthened.** The grant will support skills training and capacity building activities for local stakeholders (at least 33% of whom are women) in water operations such as plumbing, household and meter connections, pump O&M, billing, and account management. This output will enhance institutional capacity through a better-trained workforce while providing employment opportunities to the residents of the project villages.[8] Key activities under this output include (a) engaging consultants and nongovernment organizations (NGOs); (b) designing and developing capacity building programs; (c) identifying and enrolling trainees, (d) conducting classes and theoretical training, (e) conducting practical and on-

[7] Government Order on Asset Management and Service Delivery Framework (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President). *Panchayat samitis* are governing bodies working at the block level and *zilla parishads* are governing bodies working at the district level. They will provide coordination, technical, and monitoring support.

[8] A minimum of 350 additional jobs, of which at least 33% will be for women, are envisaged to be generated in project *gram panchayats* by the end of the project in 2025.

the-job training, and (f) monitoring and evaluating skills and capacity transfer.

(iii) **Output C: Innovative practices piloted, and regulatory framework and community awareness on water conservation, public health, and sanitation strengthened.** The grant will support (a) community awareness raising in water conservation, public health, and sanitation; (b) leadership and livelihood training provided to the residents of the project *gram panchayats*, including new water supply staff and executive members of village water and sanitation committees (minimum 33% female); (c) the development of a regulatory framework for fecal sludge and septage management (FSSM) for West Bengal; and (d) the piloting of innovative approaches on FSSM in one of the project districts. These activities will increase beneficiaries' participation in water management and decision-making, and support the state and the communities in improving sanitation status by raising awareness and piloting appropriate FSSM interventions for rural areas of West Bengal across the entire sanitation chain, from collection to treatment.[9] Key activities under this output include (a) engaging consultants and NGOs; (b) designing and conducting training and awareness-raising workshops on *gram panchayat*-level smart water management, water conservation, public health, and sanitation improvement; (c) designing and conducting leadership and livelihood training activities to the residents of the project *gram panchayats*; (d) identifying potential areas and districts for the FSSM pilot; (e) designing, procuring, and implementing the FSSM pilot; and (f) monitoring and evaluating the FSSM pilot and planning for replication and scaling up of FSSM in other districts of West Bengal.

## C. Cost Estimates and Financing Plan

9. The grant outputs are estimated to cost $3 million (Table 1).

**Table 1: Cost Estimates**
($ million)

| Item | | Amount[a] | Share of Total (%) |
|---|---|---|---|
| **A. Base Cost**[b] | | | |
| 1. | Output A: *Gram panchayat*-level smart water management system successfully commissioned[c] | 1.1 | 36 |
| 2. | Output B: Skills and capacity of local stakeholders for drinking water service delivery strengthened | 0.9 | 30 |
| 3. | Output C: Innovative practices piloted, and regulatory framework and community awareness on water conservation, public health, and sanitation strengthened | 0.9 | 30 |
| | **Subtotal (A)** | **2.9** | **96** |
| **B. Contingencies**[d] | | 0.1 | **4** |
| | **Total (A+B)** | **3.0** | **100** |

[a] Includes taxes and duties of $0.4 million to be financed by the government by cash contribution.
[b] In mid-2017 prices.
[c] *Gram panchayats* are governing bodies working at the village level.
[c] Maximum of 10% of the total cost.

[9] The GOWB is implementing intensive sanitation improvement programs across the state, such as Mission Nirmal Bangla, which supports the construction of toilets across districts in West Bengal so they can be declared open defecation free. The GOWB requested ADB to supplement its policy-level and piloting activities to achieve sanitation improvement across the entire sanitation chain. The project preparatory team prepared a comprehensive sanitation improvement action plan for West Bengal in consultation with the GOWB, contained in the project administration manual (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

Source: Asian Development Bank estimates.

10. The Japan Fund for Poverty Reduction (JFPR) will provide grant cofinancing equivalent to $3 million, to be administered by ADB.

11. The financing plan is in Table 2. The executing agency, implementing agency, NGOs, and other partners will provide in-kind counterpart support in the form of office space, workshop venues, vehicles, and staff.

**Table 2: Financing Plan**

| **Source** | **Amount** ($ million) | **Share of Total** (%) |
|---|---|---|
| Japan Fund for Poverty Reduction[a] | 3.0 | 87.0 |
| Government of West Bengal | 0.4 | 13.0 |
| **Total** | **3.4** | **100.0** |

[a] Administered by the Asian Development Bank.
Source: Asian Development Bank estimates.

## D. Implementation Arrangements

12. The PHED is the executing and implementing agency of the project and the grant. The project management unit (PMU) and three project implementation units (PIUs)[10] are already established for the project and will be responsible for the day-to-day administration of the grant. Procurement and disbursement will be in line with ADB's *Procurement Guidelines* (2015, as amended from time to time) and ADB's *Loan Disbursement Handbook* (2017, as amended from time to time). The grant will be implemented from July 2018 to November 2022. The estimated completion date is 30 November 2022. In accordance with ADB's *Guidelines on the Use of Consultants* (2013, as amended from time to time), three NGOs or locally experienced field-level consultants will be engaged, one for each of the project districts and reporting to each of the project PIUs. The implementation arrangements are described in detail in the project administration manual.[11]

**Table 3: Implementation Arrangements**

| **Aspects** | **Arrangements**[a] | | |
|---|---|---|---|
| Implementation period | July 2018–October 2022 | | |
| Estimated completion date | 30 October 2022 | | |
| Estimated grant closing date | 30 April 2023 | | |
| Management | | | |
| (i) Oversight body | Project steering committee:<br>GOWB chief secretary (chair)<br>GOWB principal secretary or ACS, PHED; GOWB principal secretary, P&RDD; GOWB principal secretary, finance; GOWB principal secretary, Irrigation and Waterways Department; GOWB principal secretary, PWD; GOWB engineer-in-chief, PHED, member secretary (members) | | |
| (ii) Executing agency | PHED | | |
| (iii) Key implementing agency | PHED | | |
| (iv) Implementation units | (i) Bankura, 6 staff<br>(ii) Purba Medinipur, 6 staff<br>(iii) North 24 Parganas,[b] 6 staff | | |
| Procurement | NCB (works) | 2 contracts | $0.6 million |
| | NCB (goods) | 3 contracts | $0.8 million |
| | Shopping goods | Multiple contracts | $0.1 million |

[10] The PIUs are based in Bankura, North 24 Parganas and Purba Medinipur districts (including one neighboring block in South 24 Parganas district).
[11] Project administration manual (available from the list of the list of linked documents in Appendix 2 of the report and recommendation of the President).

| Aspects | Arrangements[a] | | |
|---|---|---|---|
| | Community participation | Multiple contracts | $0.1 million |
| Consulting services | FBS | 180 person-months | $0.60 million |
| | ICS | 60 person-months | $0.16 million |
| Retroactive financing and/or advance contracting | Advance contracting will be used for consulting services to mobilize and raise community awareness on water conservation, public health, and sanitation improvement | | |
| Disbursement | The grant proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2017, as amended from time to time) and detailed arrangements agreed upon between the government and ADB | | |

ACS = additional chief secretary, ADB = Asian Development Bank, FBS = fixed-budget selection, GOWB = Government of West Bengal, ICS = individual consultants selection, NCB = national competitive bidding, P&RDD = Panchayats and Rural Development Department, PHED = Public Health Engineering Department, PWD = Public Works Department.

[a] Same implementation arrangements as for the project.

[b] Including one neighboring block in South 24 Parganas district.

Source: Asian Development Bank.

## III. DUE DILIGENCE

### A. Technical

13. The PHED recruited qualified design consultants to undertake subproject surveys and investigations for preparing preliminary and detailed design reports that included evaluating alternative techno-economic options and full life cycle costs. This work was supplemented by a large project preparatory team of consultants funded by ADB grant. All subprojects proposed under the project stem from a district-wide comprehensive water quality and sustainability assessment and the completion of drinking water quality action plans for the project districts. The British Geological Survey, which was engaged by ADB to support project preparatory due diligence, carried out a detailed analysis of arsenic and fluoride in drinking water sources in West Bengal, including their characteristics, implications, and mitigation.[12] The project preparatory consultants also carried out a detailed climate risk vulnerability assessment for the project, identifying mitigation and adaption measures for subprojects; this assessment will be included in the detailed project design and implementation.[13] The project management consultant and three design supervision and institutional support consultants will be engaged by the PHED to validate the detailed engineering designs submitted by the bulk supply and distribution network contractors.

14. All bulk supply schemes will be procured as performance-based design build operate contracts with a 2-year O&M period. All distribution network management contracts will also include a 2-year O&M period to assist the *gram panchayats* in taking over the assets gradually. The project will strengthen institutional structures and extensively build the capacity of the PHED and the project *gram panchayats* for efficient and sustainable drinking water service delivery. The project will introduce innovative practices and advanced technology for smart water management to create a model for rural water service delivery and bulk water supply systems for the state and the country. This will be a mix of appropriate (i.e., advanced but easy to use and maintain by local stakeholders) technologies such as portable meter readers, computers, asset management software, and supervisory control and data acquisition, which will meet international standards. Consultancy, design, equipment, and testing support related to a smart water management

[12] Arsenic and Fluoride in Drinking Water in West Bengal: Characteristics, Implications, and Mitigation (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

[13] Summary Project Climate and Disaster Risk Assessment and Management Report (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

system will be provided to local stakeholders of the 66 project *gram panchayats*. The system will be managed and maintained by the *gram panchayats*, which will be supported through the creation of a business and operational plan with associated capacity building and training activities to strengthen their capacity for sustainable service delivery.

## B. Economic and Other Impacts, Financial Viability, and Sustainability

15. **Economic impacts.** The economic rationale for the government's intervention is sound, as the project will provide sustainable drinking water services in the project *gram panchayats*. The economic analysis was conducted for the three sample project *gram panchayats* for which engineering designs were finalized: Chaltaberia, Kashbalanda, and Sonapukur Sankarpur. The estimated economic internal rates of return of these *gram panchayats* ranged from 13.0% to 14.2%, while the combined economic internal rate of return was estimated at 13.5%, higher than the economic opportunity cost of capital estimated at 9.0%, indicating significant economic returns. Sensitivity analysis revealed that the results are satisfactory, except under the scenario of all downside risks occurring together, i.e., (i) capital cost overrun of 20%; (ii) overrun in O&M costs of 20%; (iii) decline in estimated benefits of 20%; and (iv) 1-year delay in implementation.[14]

16. **Financial viability.** Financial analysis was conducted for the project to ascertain its sustainability and to determine the extent to which the water supply will generate revenues to cover O&M costs.[15] An incremental recurrent costs analysis was conducted for the three sample *gram panchayats*, as the proposed water user charges are expected to recover O&M costs only. The analysis concluded that the suggested water user charge structure under the AMSDF would generate sufficient revenues for O&M cost recovery. A cash flow analysis was conducted in case unforeseen circumstances constrain user charge revision or recovery. The financial projections of the sample *gram panchayats* show that their revenue account will remain in surplus with (i) improved collection efficiency; (ii) an STWM system and financial management; and (iii) continued financial support from the government. Implementation of an AMSDF will help them improve financial sustainability.

17. **Sustainability**. The GOWB has already issued a government order on the AMSDF outlining the roles and responsibilities of the bulk supplier (PHED) and the distribution service managers (the *gram panchayats*) to ensure sustainable asset management and service delivery (footnote 7). Each of the project *gram panchayats* will endorse the government order prior to the commissioning of the system.

18. The project preparatory consultants conducted a comprehensive mapping and assessment of the project *gram panchayats*, which (i) included a broad analysis of the project *gram panchayats*' capabilities based on their sociodemographic, gender, institutional, and financial resources and contexts; and (ii) ranked them as high, moderate, or low for overall capacity to sustain the assets.[16] *Gram panchayats*' operational and financial sustainability level is the key to the overall success of the project. The capacity assessment therefore reviewed some of the critical operational indicators (e.g., prior experience of managing piped water supply, and manpower availability) and financial governance indicators (e.g., budget utilization and own source revenue generation) of the project *gram panchayats*. The main purpose of the assessment

[14] Economic Analysis (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).
[15] Financial Analysis (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).
[16] Capacity Assessment of project *gram panchayats* (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

was to provide baseline data so that project consultants and the NGOs can tailor their capacity building requirements during the project period to support project *gram panchayats* in sustainable service delivery. This assessment will also assist (i) the project team in writing the terms of reference for the project consultants, particularly the project NGOs engaged under the JFPR to support the *gram panchayats*; and (ii) the NGOs in continuing the mapping and assessment of training needs during initial 2 years of the project period.

## C. Governance

19. The financial management assessment concluded that the PHED could undertake the financial management of ADB-financed projects. PHED has experience in handling large-scale projects with substantial values.[17] In addition, the PHED has an established legal, institutional, and monitoring framework available for budgeting, accounting, and auditing. The overall risk assessment for the project is *moderate*. The risk mitigation measures include (i) extending full training and capacity building support for enhancing the financial management capacity of the PHED and the PMU; (ii) strengthening the accounts and finance divisions of the PMU by engaging qualified staff; (iii) creating an internal audit process by appointing qualified staff or outsourcing to experienced audit firms; and (iv) preparing and implementing the water user charge structure and regular water user charge revisions before the completion of the project. The project will also provide support for improving the financial management capacity of the PHED and the PMU.

20. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the governments of India and West Bengal, and the PHED. The specific policy requirements and supplementary measures are described in the project administration manual (footnote 11). Based on the risk assessments, some of the mitigation measures in the project design aim to (i) establish a mechanism for regular voluntary disclosure of project-related information to project beneficiaries; (ii) use and maintain an e-procurement system to enhance transparency in project implementation; and (iii) establish a grievance redress mechanism to facilitate quick and effective resolution.

## D. Poverty and Social Impacts

21. **Poverty reduction.** The project will contribute to poverty reduction by developing infrastructure, improving quality of life, reducing women's drudgery, reducing health morbidity and health impacts of arsenic and fluoride contamination, and stimulating economic growth. The project will provide free water supply connections to the households in the project area, including the poor and vulnerable. Based on the affordability and willingness-to-pay survey carried out by the project preparatory team in the sample *gram panchayats*, water user charges will be affordable (at less than 2.5% of the mean monthly household income) and within their willingness to pay.[18]

22. **Gender.** The project is classified as gender equity. The gender equality and social inclusion action plan has clear targets, responsibilities, and resource allocation.[19] The project will generate employment for over 350 residents of the project *gram panchayats*, of whom 33% will

[17] Financial Management Assessment (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

[18] Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).

[19] Gender Equality and Social Inclusion Action Plan (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President); and Gender Analysis (accessible in the list of linked documents in Appendix 2 of the report and recommendation of the President).

be women. The project will provide continuous potable water supply through metered household connections to about 390,000 households, thus reducing the time for women to fetch water. Trade-certified trainings on utility management will enhance women's skills and employability. The PHED will conduct a gender audit and develop and adopt a gender strategy. The project, with support from the JFPR, will carry out extensive skills building, leadership, and livelihood support, and will raise awareness among local stakeholders (at least 33% of whom are women) on water conservation, public health, and sanitation improvement. It will also institutionalize a gender-responsive policy framework for service delivery through the AMSDF.

## E. Participatory Approach

23. The project will enhance the capacities of the PHED, participating *gram panchayats,* and block and district authorities in contract management, inclusive or gender-responsive delivery of drinking water services, institutional reforms, and O&M of assets, which will facilitate the long-term sustainability of the services. The project will also develop training and learning materials on socially inclusive and gender-responsive O&M services and urban service management. The models and materials developed will be able to be replicated and scaled up throughout the state and in India. The safeguards cells within each of the PIUs will be established to institutionalize gender in economic governance. Equal pay and employment opportunities will be provided for women in the project activities across project facilities.

24. The project management consultant, design supervision and institutional support consultants, and project NGOs will help the PIUs and *gram panchayats* with the implementation of all activities under the project and the grant. They will focus on building the *gram panchayats'* and its communities' capacity on smart and sustainable water management, water conservation, public health, and sanitation improvement. The grant component under the project will build on the communities' existing knowledge of hygiene practices, encourage them to put this knowledge into practice, and help improve water use efficiency and hygiene behavior and practices. The implementation of the gender-sensitive community awareness and participation plan for the project will also create the necessary awareness and ensure community benefits are maximized and avoid any potential conflicts that might occur during planning, construction, and operation by mitigating political, social, economic, technical, and even commercial constraints (footnote 19). An outreach program will be organized for schools on water, sanitation, health, and hygiene issues, with at least 33% female participants. The project NGOs will assist in conducting community consultations for the adoption of a rationalized water user charge and a financing structure for water supply and sanitation at the *gram panchayat*-level in each project district, with at least 33% female participation.

25. Three project communities were consulted during the fact-finding mission and provided very positive feedback on the envisioned participatory and capacity building approach.

## F. Development Coordination

26. The ADB project team consulted with officials from the Embassy of Japan and the Japan International Cooperation Agency office in Delhi on 1 September 2017 during the loan fact-finding mission. Ongoing projects supported by the Government of Japan in India were discussed together with lessons learned on water supply programs, especially in rural West Bengal. ADB and Japan International Cooperation Agency officials agreed on the importance of not duplicating efforts, enhancing collaboration through regular updates, and continuing to share lessons on drinking water service provision in West Bengal.

## G. Safeguards

27. The project is classified as category B for environmental safeguards as per the ADB Safeguard Policy Statement (2009). Subprojects projected to have potentially significant adverse environmental impacts (categorized as A) will not be considered for implementation under the project. The project is classified as category B for involuntary resettlement and category B for indigenous peoples. Detailed safeguards assessment and arrangements are described in section IV of the project administration manual (footnote 11).

## H. Risks and Mitigating Measures

28. The main risks relate to the sustainability of the *gram panchayat*-level water distribution services management. The overall risk assessment is moderate. The integrated benefits and impacts of the proposed grant are expected to outweigh the costs.

**Table 4: Summary of Risks and Mitigating Measures**

| Risks | Description | Mitigating Measures |
|---|---|---|
| *Gram panchayats* (governing bodies working at the village level) do not have sufficient resources to operate the water distribution system sustainably | Under the project, the PHED will supply water to overhead storage reservoirs, and *gram panchayats* will be responsible for distribution, household connections, and metering. The project *gram panchayats* will levy a flat monthly water user charge for the operation of assets developed under the project. If there is a delay in levying water user charges or if the GOWB decides not to levy any user charges, the *gram panchayats* may have financial difficulties in covering O&M costs | The Government of West Bengal issued a government order on the AMSDF, which includes levying water user charges for each connection to recover the O&M costs for the *gram panchayats*<br><br>PHED and *gram panchayats* through the AMSDF, will establish a strong legal, institutional, and financial arrangement and reach agreement on the O&M costs sharing |
| PHED do not have sufficient resources to operate the bulk water system sustainably | The PHED is responsible for rural water supply in West Bengal and meets O&M costs out of budgetary allocations from the GOWB. Gram Panchayats coordinate the water supply with the PHED within their jurisdiction. There was a practice to levy water user charges on a monthly basis, but the collections became irregular, and some *gram panchayats* discontinued the practice. In such cases water supply assets are maintained using the untied funds devolved from the GOWB | Commitment of the O&M budget allocation at both the PHED and *gram panchayat* levels is a loan condition<br><br>PHED and *gram panchayats* through the AMSDF, will establish a strong legal, institutional, and financial arrangement and reach agreement on the O&M costs sharing |

AMSDF = asset management and service delivery framework, GOWB = Government of West Bengal, O&M = operation and maintenance, PHED = Public Health Engineering Department.
Source: Asian Development Bank.

# IV. ASSURANCE

29. The governments of India and West Bengal and the PHED have assured ADB that implementation of the JFPR grant shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the project administration manual and the grant agreement.[20]

[20] Legal document to be signed by the governments of India and West Bengal and ADB.